WHAT IS CLAIMED IS:

1. A sensor (ET sensor) for use in measuring endotoxin (ET) by a surface plasmon resonance (SPR), comprising a substance that is capable of specifically binding to ET and is immobilized on a thin metal film carrier.

2. A sensor according to Claim 1, wherein the substance is polymyxin B (PMX) or an anti-ET antibody.

3. A sensor according to Claim 1 or 2, wherein the carrier is a gold film.

4. A method for measuring ET by SPR after putting a test specimen into contact with an ET sensor that utilizes SPR wherein a substance capable of specifically binding to the ET is immobilized on a thin metal film carrier.

5. A method according to Claim 4, wherein the ET sensor is further allowed to react with an anti-ET antibody or PMX.

6. A method according to Claim 4, wherein the ET sensor is allowed to react with an anti-ET antibody and is then further allowed to react with another antibody that

reacts with the anti-ET antibody.

7. A method according to Claim 4, wherein the ET sensor is allowed to react with PMX and is then further allowed to react with another antibody that reacts with PMX.

8. A method according to Claim 6, wherein another antibody is modified antibody thereof.

9. A method according to Claim 7, wherein another antibody is modified antibody thereof.

10. A method according to any one of Claims 4 to 9, wherein the ET is a lipopolysaccharide (LPS), endotoxin, a pyrogenic substance, or a pyrogen.

11. A method according to Claim 10, wherein the test specimen is selected from a group consisting of a biological specimen, a culture solution, dialysate, waste of the dialysate, water for injection, a pharmaceutical agent, and pure water.

12. A method for evaluating ET contamination by the method according to Claim 10.

13. A method for diagnosing a bacterial infection by the method according to Claim 11.

14. A method for reusing a used ET sensor by putting it into contact with a regenerant that can elute ET trapped on the used ET sensor, after the measurement by the method according to any one of Claims 4 to 9 is completed.

15. A method for manufacturing the ET sensor according to Claim 3.

16. A kit for measuring ET comprises at least one of an ET sensor using SPR by immobilizing a substance that is capable of specifically binding to ET on a thin metal film carrier, a reagent for use in a method for measuring ET using SPR after putting the ET sensor into contact with a test specimen, and a reagent for use in a method for reusing according to Claim 14.

17. Use of a SPR carrier chip (SPR sensor chip) for use in the method according to any one of Claims 4 to 9.